

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

In the matter of the amendment of ARM)	NOTICE OF AMENDMENT AND
17.38.101, 17.38.201A, 17.38.202,)	ADOPTION
17.38.203, 17.38.204, 17.38.208,)	
17.38.209, 17.38.216, 17.38.225,)	(PUBLIC WATER SUPPLY)
17.38.234, and 17.38.239, pertaining to)	
incorporation by reference of current)	
federal regulations and other materials in)	
the public water supply rules, and the)	
adoption of New Rule I pertaining to)	
consecutive system coverage)	

TO: All Concerned Persons

1. On August 28, 2008, the Board of Environmental Review published MAR Notice No. 17-273 regarding a notice of public hearing on the proposed amendment and adoption of the above-stated rules at page 1731, 2008 Montana Administrative Register, issue number 16.

2. The board has amended ARM 17.38.202, 17.38.203, 17.38.204, 17.38.208, 17.38.209, 17.38.216, 17.38.234, and 17.38.239 and adopted New Rule I (17.38.210) exactly as proposed. The board has amended ARM 17.38.101, 17.38.201A, and 17.38.225 as proposed, but with the following changes, deleted matter interlined, new matter underlined:

17.38.101 PLANS FOR PUBLIC WATER SUPPLY OR WASTEWATER SYSTEM (1) and (2) remain as proposed.

(3) As used in this rule, the following definitions apply in addition to those in 75-6-102, MCA:

(a) and (b) remain as proposed.

(c) "Main" means any line providing water or sewer to multiple service connections, any line serving a water hydrant that is designed for fire fighting purposes, ~~and~~ or any line that is designed to water or sewer main specifications;

(d) through (17) remain as proposed.

17.38.201A INCORPORATION BY REFERENCE--PUBLICATION DATES AND AVAILABILITY OF REFERENCED DOCUMENTS (1) Unless expressly provided otherwise, in this subchapter where the board has:

~~(a)~~ adopted and incorporated by reference a federal regulation, the reference is to the July 1, 2007, edition of the Code of Federal Regulations (CFR).

(2) through (4) remain as proposed.

17.38.225 CONTROL TESTS (1) remains as proposed.

(2) At least two chlorine residual tests must be conducted daily, one at each entry point and one in the distribution system:

(a) and (b) remain as proposed.

(c) by a consecutive system that receives chlorinated water from its wholesaler. For consecutive systems, the entry point is the point at which the purchased water enters the distribution system of the consecutive system. The department may waive, on a case-by-case basis, the requirement for:

(i) entry point sampling; and

(ii) entry point sampling and distribution system sampling, if the consecutive system produces treated water for vending or bottling where the treatment is designed to produce a product free of chlorine.

(3) through (7) remain as proposed.

3. The following comments were received and appear with the board's responses:

COMMENT NO. 1: One commentor proposed the following clarification to the proposed definition of "main" in ARM 17.38.101: "...any line serving a water hydrant that is designed for fire fighting purposes, ~~and~~ or any line that is designed to water or sewer main specifications." Replacing "and" with "or" clarifies that the various components of the definition are not all required.

RESPONSE: The board agrees with this change and has amended the rule accordingly.

PWS-5 Comments; ARM 17.38.209

COMMENT NO. 2: The department should finish making final determinations in the current round of PWS evaluations before making guidance changes that will likely have a widespread impact on systems already reviewed.

RESPONSE: The proposed changes to Department Circular PWS-5 (PWS-5) "Ground Water Under the Direct Influence of Surface Water" will not have a widespread impact on systems. Most of the changes to PWS-5 clarify the department's existing interpretation and application of the Circular. The department does not consider the preliminary assessment as a final decision. The proposed changes clarify that the department may use any and all test methods to determine whether ground water is at risk of contamination by surface water, and clarify that the department's determination may be changed by new information. The determinations in the current round of PWS evaluations will not be overturned absent new information, but they will be reviewed during each subsequent sanitary survey.

COMMENT NO. 3: Changing a PWS source to "Ground Water Under the Direct Influence of Surface Water" (GWUDISW) will have a significant adverse financial and operational impact on the system. Rather than setting up an evaluation process that over-regulates, the department should be looking to support a way for systems to avoid the surface water treatment rule.

RESPONSE: Under applicable technical literature, the federal Safe Drinking Water Act, and Montana law and rules, ground water is generally considered to be a safer drinking water source than surface water because the soil filters potential

pathogens from ground water. Considering the potential adverse health effects associated with drinking untreated surface water, it is important to have a reliable process for determining whether ground water sources are at risk from surface water contamination. Surface drinking water sources must treat and then monitor to ensure the treatment was effective. Ground water sources are required to monitor, but not treat unless a problem is identified. This process is essential to protect public health and is not over-regulation.

COMMENT NO. 4: Why does Department Circular PWS-5 specify the order in which the evaluation steps proceed? Most systems should be finished after a Preliminary Assessment (PA). Is EPA requiring states to re-evaluate systems with PAs?

RESPONSE: Describing the process of evaluation provides guidance to regulated systems. The department has never viewed a PA as being a final determination. In some cases a PA may be determinative, but in others specific factors may require further evaluation. The Environmental Protection Agency's (EPA's) Surface Water Treatment Rule Guidance document states that any finding, other than a finding that a source is under the direct influence of surface water, should be reviewed no less frequently than during each subsequent sanitary survey. Pursuant to the EPA guidance, the department will review systems with PAs during each subsequent sanitary survey.

COMMENT NO. 5: Section 1 in PWS-5 contains new language to the effect that the department has discretion to require any or all of the listed evaluation steps. What gives the department legal authority to do this? The process appears to be arbitrary.

RESPONSE: The department has never viewed a PA as being a final determination. The proposed changes to PWS-5 clarify that further study after a PA is an option and make minor changes to the PA scoring system. The legal authority for the board's adoption of PWS-5 is in statute at 75-6-103, MCA. EPA drinking water rules, at 40 CFR Part 142, require that Montana have this authority. In addition, ARM 17.38.219, Special Samples, allows the department to require additional samples to determine the adequacy of the source, storage, treatment, or distribution of water to the public. The process is not arbitrary. It is designed to ensure that drinking water quality is protected by allowing the department to evaluate all factors that may contribute to potential contamination. Experience has shown that a one-time test or a single type of test may not be effective in making that determination.

COMMENT NO. 6: In section 2 of Department Circular PWS-5, why are infiltration galleries included in the text listing types of ground water sources but not included on the scoring sheet for PAs?

RESPONSE: The list in section 2 of PWS-5 is not intended to classify each of the listed source types as a ground water source. The intent of PWS-5 is to identify the processes the department will use to make the determination whether a specific source is ground water. The requirements in PWS-5 apply to every source that is not classified as surface water or ground water under the direct influence of

surface water. The term "infiltration gallery" is being replaced on the PA form with the term "horizontal well" due to a conflict in the Safe Drinking Water Information System database that the department uses to maintain system information. In that database, which was created by EPA, a source identified as an infiltration gallery is automatically determined to be surface water and the surface water requirements are applied even though the department may not have made that determination. By changing the term to horizontal well, the department may allow a system to continue as a ground water system until the department makes a determination to the contrary.

COMMENT NO. 7: Section 3 of PWS-5, regarding PAs, is deficient as applied to new sources for which there is no historical data and no violations because the source is new. The design engineer should follow department design standards, and department engineers should work closely with the design engineer in reviewing the system.

RESPONSE: New sources that do not have a history will not be scored under the history sections of the PA. The source will be reviewed for the other components that may place the source at risk. The board and the department agree that design engineers should follow department design standards and that department review engineers will closely examine plans for compliance. Sources that are properly designed and constructed as ground water sources have a greater potential to avoid the surface water requirements. However, many factors can change that may cause that source to come under the direct influence of surface water. For instance, a well casing may fail allowing an upper aquifer that is affected by surface water to enter the well, or geologic processes may change the source water's source.

COMMENT NO. 8: Section 3 of PWS-5, regarding PAs, is modified to say that sources that score less than 40 points on a PA may be classified as ground water "unless other information is available." What constitutes other information? Sources need predictability in their status.

RESPONSE: The purpose of this change is to clarify that the PA is only one assessment tool and not a final department determination. A well may be designed and constructed as a ground water source. That source may pass the PA and be classified as a ground water source, only to have a future failure of the well construction allow the entrance of surface water. Protection of drinking water quality should be a top priority for water supply systems, and the systems should be prepared to address unexpected developments that may impact water quality.

COMMENT NO. 9: A commentor described several ways in which the department's GWUDISW scoring system is different than that used by EPA and one other state.

RESPONSE: As a drinking water primacy agency, Montana is required by EPA to develop a process for determining when ground water is under the direct influence of surface water. EPA does not specify a process to use. In order to assist agencies in developing a process, EPA created a guidance manual entitled "Guidance Manual for Compliance with the Filtration and Disinfection Requirements

for Public Water Systems Using Surface Water Sources (SWTRG)." The introduction to the manual states, "...These recommendations are presented as advisory guidelines only; unlike the provisions of the [surface water treatment rule], these recommendations are not mandatory requirements." The intent is to allow individual primacy agencies to determine the best process for making those determinations.

COMMENT NO. 10: One comment was received pertaining to page 9 of PWS-5, item 4, "Well or horizontal well less than 100 feet from surface water." stating that the board should add the language "Must undergo further GWUDISW analysis."

RESPONSE: The board agrees and has made that change.

COMMENT NO. 11: One commentor stated that the language "Type of Structure" on page 9 of PWS-5, Item A should be changed to "Type of Source."

RESPONSE: The board agrees and has made that change.

COMMENT NO. 12: One commentor submitted a comment asking why the word "will" was changed to "may" in the first paragraph on page 12 of PWS-5, Section 3.1. What circumstances would prevent a source from being classified as ground water?

RESPONSE: This change clarifies that the PA is not a final determination. Although the source may be classified as ground water at the time the PA is completed, the designation may be changed in the future if conditions change that alter that determination.

COMMENT NO. 13: Section 4 of PWS-5 states that the department must review and approve the evaluation methods a system uses to make a GWUDISW determination. A system's input is critically important and should not be summarily rejected.

RESPONSE: The sentence in question is in the current PWS-5 and is not modified in this rulemaking, so the comment is outside the scope of this rulemaking. In any event, the department must have authority to make the final determination regarding evaluation methods. Anything less would not be protective of public health nor would it satisfy EPA requirements for federally-approved drinking water programs. The board agrees that a system's input is important and should not be summarily rejected.

COMMENT NO. 14: Why was Section 3.3 of PWS-5 removed? This section appears to give systems some relief from further monitoring.

RESPONSE: Section 3.3 was removed to clarify that the department may use any information available to make its determination. Please see proposed Figure-1. Proposed Figure-1 also clarifies that a repair made to a source will allow that source to be classified as ground water only if that repair causes the scoring to be reduced below the 40 point level.

COMMENT NO. 15: Figure 4.1 in PWS-5 shows that, to pass as ground water under a preliminary assessment, disinfection may be required due to "vulnerability." Does PWS-5 address vulnerability? Disinfection should be addressed under the ground water rule.

RESPONSE: Montana has not adopted the federal ground water rule. However, ARM 17.38.229, Disinfection, requires mandatory disinfection whenever the source may be exposed to a potential source of contamination through unprotected or poorly protected ground water sources. The department may require a disinfectant that maintains a residual in the distribution system to ensure safe drinking water.

COMMENT NO. 16: One commentor inquired as to whether the subject "Proposed Ground Water Sources," which is addressed at page 16 of PWS-5, is already addressed at page 6 under Section 3.0.

RESPONSE: The paragraph in question is in the current PWS-5 and is only modified in this rulemaking by removing the language "The suitability of new" at the start of the paragraph and replacing it with the word "New." The proposed change clarifies that a proposed new source must be evaluated under the GWUDISW process as opposed to just its suitability.

COMMENT NO. 17: Section 6 of PWS-5 requires water quality monitoring as part of a water quality assessment. A proposed modification to Section 6 would allow the department to impose "other requirements" at the agency's discretion. What are these other requirements? The Section also recommends dedicated data loggers. Who will pay for the equipment?

RESPONSE: The proposed change clarifies that the department may specify what information the system must produce so that the department may make an informed decision as to the source of water. Other requirements may include additional water quality parameters that may allow the department to make a better decision regarding the source of the water and its potential to cause harm to public health. ARM 17.38.219, Special Samples, also allows the department to require additional samples to determine the adequacy of the source, storage, treatment, or distribution of water to the public.

This section indicates that data loggers may assist the system with collecting the required data. Although they are not normally required, the department may require them in order to collect continuous data under certain conditions. For instance, sources may not be accessible at all times due to weather, or sources may have influences that are of short duration. If the department determines that data loggers are necessary, it is the system's responsibility to provide that equipment.

COMMENT NO. 18: Why does Section 6.1 of PWS-5 require sampling for infiltration galleries if they are not listed on the score sheet?

RESPONSE: The term "infiltration gallery" is being replaced on the preliminary assessment form with the term "horizontal well" due to a conflict in the Safe Drinking Water Information System database that the department uses to maintain system information. In that database, which was created by EPA, any source that is identified as an infiltration gallery is automatically determined to be

surface water and the surface water requirements are applied even though the department may not have made that determination. The terms "infiltration gallery" and "horizontal well" are interchangeable for the purposes of PWS-5.

COMMENT NO. 19: A proposed modification to Section 7 of PWS-5 states that a moderate- to high-risk finding from a microscopic particulate analysis (MPA) results in a conclusion that the source is under the influence of surface water unless there are mitigating factors associated with well construction or other human activities. What are these mitigating factors? Why not follow the procedures used by EPA and other states, in which a moderate MPA finding leads to additional testing, not a GWUDISW determination?

RESPONSE: All ground water sources are influenced by surface water. The question is whether there is the potential that surface water pathogens are present. MPAs assign a "risk" value for that potential based on the presence and quantities of specific surface water contaminants. Even a system with low-risk scores has the potential to adversely affect public health. The proposed change to PWS-5 will classify sources with moderate or high risk as GWUDISW and will trigger a source construction investigation. The old language required repair of construction deficiencies and retesting to determine if the risk is lowered due to the repairs, but did not classify the source as GWUDISW while repair and retesting was conducted. The EPA classification procedures are not binding on the states. See Response to Comment No. 9. For the protection of public health, the board and the department believe it is important to require sources that show a moderate or high risk of surface water contamination to treat as surface water until the source can be shown otherwise. The department may change a GWUDISW determination back to "ground water" if there is some human activity that caused the sample result to be swayed; e.g., construction issues, tampering with the sampling equipment or source, or any other issue that would cause the result to not correctly describe the risks associated with the source.

COMMENT NO. 20: One commentor stated that "October" on page 32, PWS-5, should be changed to "December 1, 2009."

RESPONSE: The board agrees and has made the change.

COMMENT NO. 21: Page 33 of PWS-5 addresses inconsistent findings from multiple microscopic particulate analyses. Why is this section revised to delete "moderate" risk results?

RESPONSE: Both moderate- and high-risk results indicate a source that has an unacceptable potential to adversely affect public health. Only when two additional tests show low risk is it appropriate to conduct further testing to determine whether the initial high-risk result was an anomaly.

COMMENT NO. 22: The proposed changes to PWS-5 are unnecessarily more stringent than the comparable federal regulation. The portions of the rule related to GWUDISW should be rejected because the requirements of 75-6-116, MCA, cannot be met. The information available for public comment is also woefully deficient.

RESPONSE: Special findings under 75-6-116, MCA, are not required for the adoption of PWS-5 because there are no comparable federal regulations or guidelines. EPA has promulgated a guidance manual to assist states in complying with the federal requirements regarding determining whether ground water is directly influenced by surface water. However, the EPA Manual is informational only, and EPA encourages states to develop their own procedures for assessing the potential risks from surface water contamination. The forms used by EPA and other states for GWUDISW evaluations are not applicable to systems regulated under Montana's PWS laws.

The board believes that the public notice procedures were adequate for PWS-5. Notice of the proposed rule amendments was sent to all public water supplies in the department's database, all owners of public systems, all certified operators, all parties on the department's interested parties list, and all consulting engineers that have submitted plans and specifications to the Public Water Supply and Subdivisions Bureau in the last five years.

All of the proposed changes to PWS-5 were shown, in underline/strikeout format, on the department web site. The notice of proposed rulemaking provided the public with the web site address.

COMMENT NO. 23: It would be more constructive and serve the systems of Montana and the citizens of Montana better if the board did not adopt the revised PWS-5 guidance document. It should be sent back to the department for further work with stakeholders or a more substantial public comment process that would allow interested parties to understand the changes and make meaningful comments.

RESPONSE: The board does not believe that postponing these changes would better serve the systems or citizens of Montana. The notice procedures in this case were sufficient to allow interested parties to view all of the proposed changes to PWS-5 and to make meaningful comments.

ARM 17.38.225

COMMENT NO. 24: One commentor is concerned with the financial impact of requiring consecutive systems to sample for chlorine residual on more than a monthly basis. The commentor proposes a modification to allow monthly sampling.

RESPONSE: Consecutive systems are currently required to comply with the chlorine residual testing requirements in ARM 17.38.225. The amendments simply clarify that requirement and specify the entry point. Consequently, the comment is outside the scope of the current rulemaking. In any event, systems are only required to supply full time disinfection if there is a potential for a health risk to the system. That risk is not diminished by selling the water from one system to another. Testing on a monthly basis is not adequate to determine whether proper disinfection is occurring.

COMMENT NO. 25: The proposed amendment to ARM 17.38.225(2)(c), which requires chlorine residual tests for consecutive systems that receive chlorinated water from a wholesaler, is unworkable for consecutive systems that treat water for vending to produce a product free of chlorine.

RESPONSE: The board agrees and has modified ARM 17.38.225(2)(c) to allow the department to waive the requirement for consecutive systems that treat water for vending where the treatment is designed to produce a product free of chlorine. The same rationale also applies to some consecutive systems that treat water for bottling. The board has modified the rule accordingly, and has also included a waiver for entry point sampling for consecutive systems. This waiver will be applied on a case-by-case basis where there is little potential for a change in chlorine residual level between the entry point sample and the farthest distribution sample.

New Rule I Comments

COMMENT NO. 26: Systems affected by proposed New Rule I may not know that they are subject to this regulation and their concerns may not have been adequately addressed.

RESPONSE: The board believes that the public notice procedures were adequate for these rules. See Response to Comment No. 22. There may be consecutive systems meeting the definition of a public water supply that are not aware they are subject to the current regulations. As those systems are identified, the department will work with them to come into compliance with the requirements. New Rule I was proposed to give some of those systems the ability to be excluded from the requirements of 40 CFR Part 141.

COMMENT NO. 27: A municipal water supply system commented that New Rule I may impose additional sampling and monitoring requirements on the wholesale system.

RESPONSE: New Rule I does not impose any new requirements on wholesale systems without the agreement of the wholesale system. To allow a consecutive system to be exempt from the requirements of 40 CFR Part 141, the wholesale system must agree to the requirements in New Rule I(1)(e). New Rule I(1)(e) would not necessarily increase the wholesale system's sampling requirements. See Response to Comment No. 28.

COMMENT NO. 28: One commentator requested more specificity regarding the parameters to be used by the department when determining whether an excluded consecutive system is included in the sampling plan of a wholesale system.

RESPONSE: Some sampling requirements are based on the population exposed to a system's water. For instance, the number of total coliform bacteria samples required per period is based on population. If a wholesale system does not consider the population of its consecutive systems, and the consecutive systems are not sampling because they are excluded under New Rule I, the sample count/population ratio requirements could be violated. Some sampling requirements also have criteria to consider when picking a sample location. A wholesale system would not be allowed to sample from less critical sites when there are higher risk sites in an excluded consecutive system.

COMMENT NO. 29: New Rule I regarding consecutive systems could result in adverse economic impacts to regional water systems. Were universities, colleges, and other such facilities notified of the rulemaking process?

RESPONSE: New Rule I is an exemption from 40 CFR Part 141, and so it will reduce, not increase, the regulatory requirements for eligible consecutive systems. New Rule I adopts federal language in 40 CFR 141.3 that exempts certain consecutive systems from the requirements of 40 CFR Part 141. This language previously has not been adopted by Montana and, under current Montana laws and rules, all consecutive systems are required to comply with those requirements. Under 40 CFR 141.3 and Montana law, consecutive systems meeting the exemption still remain public water supplies and will still be subject to certain Montana requirements. Notice of the proposed rule amendments was sent to a broad range of interested parties and stakeholders. See Response to Comment No. 22.

COMMENT NO. 30: A regional water distribution system that will purchase water and resell it to systems that serve the ultimate users commented that New Rule I should be modified to allow the regional water system to qualify for the proposed exemption from the requirements of 40 CFR Part 141.

RESPONSE: The regional water system does not qualify for the exclusion in proposed New Rule I because the system resells water. The commentor's proposed modification to New Rule I would delete the resale prohibition for systems like itself. This would make New Rule I less stringent than the federal exclusion at 40 CFR 141.3. If Montana is to retain primacy under the federal Safe Drinking Water Act, New Rule I cannot be less stringent than the federal exclusion. To preserve the primacy of Montana's drinking water program, the board will not make the proposed change. From a public health point of view, the regional system should not be excluded from the sampling requirements in 40 CFR 141 because of the extent of the system's distribution system.

COMMENT NO. 31: The new rule regarding consecutive systems is more stringent than the federal rule at 40 CFR 141.3, in violation of 75-6-116, MCA.

RESPONSE: The board has addressed the requirements of 75-6-116, MCA. The board has adopted the department's legal analysis, contained in the record, regarding those requirements and has concluded that, although special stringency findings are not required, the requirements in New Rule I do protect public health and the environment, can mitigate harm to the public health and the environment, and are achievable with current technology. An additional reason that special stringency findings are not required is that New Rule I(1)(e)(ii) implements a specific directive in 75-6-103(2)(d), MCA, to the board to adopt rules requiring public notice to all users of a public water supply system when the system is in violation status. A specific statutory requirement to adopt a rule, with no reference to stringency findings, supersedes the general requirements of 75-6-116, MCA.

Reviewed by:

BOARD OF ENVIRONMENTAL REVIEW

/s/ James M. Madden

JAMES M. MADDEN

Rule Reviewer

By: /s/ Joseph W. Russell

JOSEPH W. RUSSELL, M.P.H.

Chairman

Certified to the Secretary of State, December 15, 2008.